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ABSTRACT

This study examined anxiety as a mediator on the relation between exposure to violence and victimization mediated by gender. The sample consisted of 1,311 seventh graders attending 8 middle schools in a small southern city. Gender was found to be a significant moderator for the relation of exposure to violence and victimization; therefore, subsequent analyses were conducted separately for males and females. Differences were noted on measures of anxiety, exposure to violence, and victimization, with males reporting more exposure to violence and victimization, but less anxiety for females. For both males and females, anxiety was found to be a partial mediator for the relation of exposure to violence and victimization. Implications of these findings are discussed. (Contains 5 tables and 47 references.) (Author/SLD)

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Anxiety As A Mediating Effect on the Relation Between Exposure to Violence and Victimization Moderated by Gender for 7th Grade Students

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ABSTRACT

The study examined anxiety as a mediator on the relation between exposure to violence and victimization moderated by gender. The sample consisted of 1,311 seventh grade students attending eight middle schools located in a small southern city. Gender was found to be a significant moderator for the relation of exposure to violence and victimization; therefore, subsequent analyses were conducted separately for males and females. Differences were noted on measures of anxiety, exposure to violence, and victimization, with males reporting more exposure to violence and victimization but less anxiety than females. For both males and females, anxiety was found to be a partial mediator for the relation of exposure to violence and victimization. Implications of these findings are discussed.

Anxiety As A Mediating Effect On The Relation Between Exposure To Violence And Victimization Moderated By Gender For 7th Grade Students

Violent behavior has become a reality in our schools with guns and knives replacing fists and name-calling, especially in the upper grades (Ballard, Argus, & Remley, 1999). Despite the fact that sensational acts of school violence are relatively rare, ongoing aggression and victimization are significant problems that occur in schools on a daily basis (Leff, Power, Manz, Costigan & Nabors, 2001). Previous research has found that 10-20% of younger school children are repeatedly teased, threatened, or attacked by their peers (Batsche & Knoff, 1994; Kochenderfer & Ladd, 1996; Leff, Kupersmidt, Patterson, & Power, 1999).

Victims of violent behavior tend to have a fear of going to school, which escalates with advancement from elementary school to middle schools due to the change in types of victimization (i.e. from teasing to fighting to weapons). Victimization creates additional problems such as poor academic performance, an inability to concentrate, feelings of insecurity and anxiety (Oliver, Hoover, & Hazler, 1994). Furthermore, victims tend to have low self-esteem, few friends, and a sense of failure. Most victims are ineffective in establishing peer relationships therefore leaving themselves vulnerable to school isolation and possibly increasing any feelings of loneliness or abandonment (Kochenderfer & Ladd, 1996; Oliver, Hoover, & Hazler, 1994; Ballard et al, 1999).

It is evident from the extent of existing research on violence-related problems that adolescents are at a greater risk for all types of violence exposure including witnessing violence, victims of violence and perpetrators of violence And furthermore, victimization and exposure to violence not only occur in the home and neighborhood, but in our schools as well (Weist, Acosta, & Youngstrom, 2001; Fitzpatrick, 1999; Hannish & Guerra, 2000; Prinstein, Boergers,

& Vernberg, 2001; Batsche & Knoff, 1994; Grills & Ollendick, 2002; Olweus, 1978; Kochenderfer & Ladd, 1996; Oliver, Hoover, & Hazler, 1994; Ballard et al, 1999). School violence typically refers to acts of assault, theft, and vandalism. With the escalating public apprehension about school safety, researchers have broadened the definition of school violence to include "any conditions or acts that create a climate in which individual students and teachers feel fear or intimidation in addition to being the victims of assault, theft, or vandalism: (Batsche & Knoff, 1994, p. 165). Therefore, the purpose of this study is to examine the mediating effect of anxiety on the relation between exposure to violence and victimization moderated by gender for 7th grade students attending a public middle school.

Anxiety

Continuing types of abusive situations as a witness to or on the receiving end of repeated acts of harm to another through words or physical attacks on school grounds or on the way to or from school often result in anxiety, anger, and depression (Hazler, Miller, Carney, & Green, 2001). Consequently, children who are exposed to violence as either victims or witnesses experience higher levels of depression, anxiety, and emotional distress, all of which can impair individual development and educational achievement (Jang & Throberry, 1998: Shapiro, Dorman, Burkey, Welker, & Clough, 1997;Cooley-Quille, Boyd, Frantz, & Walsh, 2001).

Kochenderfer & Ladd (1996) found that the duration of the victimization experience is directly related to school adjustment problems. In a study of self-regard and victimization, Egan & Perry (1998) found that the experience of being victimized decreased self-regard over time. Additionally, similar studies have shown increased connection between high levels of exposure to violence and indicators of poor adjustment including depression, anxiety and anti-social

behavior (Schwab-Stone, Chen, Greenberger, Silver, Lichtman & Voyce 1999; Stolzenberg & Stewart, 2000).

Children who experience victimization tend to be labeled as victimized and consequently preserve that label throughout the years (Grills & Ollendick, 2002; Kumpulainen, Rasanen, & Henttonen, 1999; Perry, Kusel, & Perry, 1988). Therefore, it is not surprising that children who are victimized by their peers also develop symptoms of anxiety (Grills & Ollendick, 2002). Craig (1998) found that victimized children reported significantly greater social anxiety than children classified as bullies or as neither bullies nor victims. Grills & Ollendick (2002) found that relations between peer victimization and anxiety for both boys and girls, suggesting that children who report a higher degree of victimization also have more symptoms of anxiety.

Slee (1994) found that "fear of retaliation" was a primary reason given for not assisting another being victimized. Additionally, Slee found over 25% of students felt unsafe from "bullying" at school, which he attributed to the anxiety-provoking nature of the experience.

Exposure to Violence

Chronic exposure to even low levels of violence, especially when occurring in settings expected to provide safety and security, such as the home or school, negatively affect social development (Richters & Martinez, 1993, as cited in Raviv, Erel, Fox, Leavitt, Raviv, Dar, Shahinfar, & Greenbaum, 2001; Gumpel & Meadan, 2000). Because children learn social skills primarily in the home and school environments, exposure to violence in these settings often result in increased aggressive and antisocial behavior (Baker, 1998).

Direct victims are obvious, but indirect victims are far numerous because they include bystanders, those familiar with victims, or those cognizant or anxious about the potential for violence (Lorion, 1998). Additionally, chronic exposure to violence is believed to have

negative impact and adaptive functioning (Attar, Guerra, & Tolen, 1994). Violence exposure has been associated with declines in cognitive performance and attentional impairment (Saltzman, 1996, as cited in Cooley-Quille et al, 2001). This could be a result of lower concentration levels due to distracting thoughts regarding violent events.

The distress influenced by exposure to violence may vary by mode of exposure. For example, research has found there is a relation between stress and hearing about or witnessing violence (Cooley-Quille et al, 2001). Both observation and victimization have been associated with posttraumatic stress syndrome. Furthermore, research implies that the form or modality of exposure to violence may lead to its emotional impact on children and adolescents (Cooley-Quille et al., 2001).

Adolescents exposed to chronic violence may be worried or fearful of being injured or put in jeopardy by some unknown or impending violent act. Martinez & Richters (1993) found that community violence exposure in youth was significantly associated with fears at home and in school. Additionally, half of the youth indicated that they worried about safety a great deal. Shwab-Stone, Ayers, Kasprow, Voyce, Barone, Shriver, & Weissberg, (1995) found that 74% of their student sample reported feeling unsafe in one or more environments.

Victimization

Hoover et al., (1992) suggest that victimization is perceived to be a serious problem and is more prevalent in the United States than European countries. Likewise, more than one-third of middle school students felt unsafe at school because of bullying and did not report such actions to school personnel because they were scared, lacked the fundamental skills for reporting, and felt teachers and administrators did nothing to stop the bullying (Batsche & Knoff, 1994; Hazler, Hoover, & Oliver, 1993, Slee, 1994).

A single student who victimizes can have far-reaching effects in the school and create an atmosphere of anxiety and intimidation not only in his or her victims but in fellow students as well. When asked for the number one reason for not returning to school, 10% of high school dropouts reported fear of being harassed or attacked (Greenbaum, Turner, & Stephens, 1988, as cited in Bosworth, Espelage, & Simon, 1999).

Victims fear going to school, which in turn creates more problems such as poor academic performance, which is often due to lack of concentration (Ballard et al., 1999). With an ever-present threat of violence, these students constantly feel anxious and insecure. Additionally, most victims tend to be weaker than their peers, making them more vulnerable to attacks (Hoover & Hazler, 1991).

Victims tend to suffer from a loss of self-esteem lasting long into their adult life (Boulton & Underwood, 1992; Slee 1994) and therefore are prone to become the aggressor later in life resulting in spouse and child abuse (Ma, 2001).

Gender Differences

With youth spending a large majority of their time in and around school, the likelihood of encountering violence in this setting compared to others seems more likely. In fact as much as 40% of all violent crimes and more than 60% of crimes of theft against youth between the ages of 12 and 19 takes place in or around schools (Fitzpatrick, 1999). Regardless of the context (schools, homes, or communities), there are certain sociodemographic subgroups youth at greater risk of being victims of violence including gender differences.

Previous research has found that boys are more likely than girls to be perpetrators as well as victims (Boulton & Smith, 1994; Rigbee & Slee, 1993). However, girls tend to engage in more covert forms of indirect (e.g. witnessing) aggressive behavior (Crick, Bigbee & Howes,

1996). McGee & Baker (2002) found gender differences exist for all direct victimization experiences, including those involving gang activity, drug dealing, and violent attacks. Additionally, young men were more likely to report higher levels of victimization and young girls were more likely to report muggings and attacks with guns.

McGee & Baker (2002) also found gender differences for exposure to violence. Young men were more likely to report seeing people selling or using drugs and hearing gunfire in or near school whereas young girls were more likely to report seeing people chased by gangs and seeing someone being beaten up or mugged. Fitzpatrick (1999) found that males in middle schools clearly had greater odds of being the victims of violence compared to females.

Theory

The schools of this nation were once thought of as safe havens for our children; however today they are experiencing heightened violence and crime. School-based violence has increased in both its rate and lethality (Grant, Van Acker, Guerra, Duplechain, & Coen, 1998). In response to school violence, many schools have implemented programs and policies to reduce antisocial behavior by their students. Preventive measures concentrate on increased security (metal detectors, student identification cards, limiting the entrances and exits of the school building).

The view that antisocial behaviors, such as aggression, are learned via social interactions across multiple contexts, involving modeling and reinforcement that lead to the development of associated cognitive structures and process, has direct implications for exposure to violence and victimization. Social learning theory may play an important role in explaining the perpetrator-victim cycle as it has been used in the studies of violence and abuse (Ma, 2001). For example, Lorber, Felton, & Reid (1984) discussed the role of social learning theory in the victim-offender cycle of abuse. These researchers found that victims of abuse are often more likely to be

disruptive, aggressive, and violent than their non-abused counterparts, and they explained such results as socially learned behaviors. This explanation appears to fit well into some findings in bullying research that some of the most extreme victims of bullying are also some of the most aggressive bullies (Perry, et al., 1988, as cited in Ma, 2001).

Mediator Model

Earlier studies have shown that exposure to violence can have a negative impact on an individual's socio-emotional development (Flannery & Quinn-Leering, 2000). Martinez & Richters (1993) found that 50% of children who were exposed to trauma when they were less than 10 years of age developed increased rates of anxiety and depression. As children grow older, opportunities for exposure to violence increases. However, the question comes to mind once a child is exposed to violence and experiences increased anxiety, what happens next? It is reasonable to conclude that students who are exposed to violence (in the home, school or community) would be more careful to avoid situations that would lead to their own victimization. Thus, there would be a negative relation between anxiety and victimization.

Moderator Model

There have been a number of studies examining gender differences with victimization and it has been noted that boys and girls experience different forms of victimization (i.e., physical, verbal, relational) with boys most likely being physically victimized and girls most likely being relationally victimized (Crick & Bigbee, 1998). Yet, inconsistent gender differences have emerged across studies. Some studies that have examined gender as a moderator have found few sex differences in predictors of victimization (Crick et al., 1999; Hodges et al., 1997; Hodges & Perry, 1999; Schwartz et al., 1999) whereas Schwartz et al. (1999) found that attention problems to be a strong predictor of victimization for girls but not for boys. Crick et al. (1999)

found gender differences in the link between pro-social behavior and victimization, with pro-social behavior negatively predicting relational victimization for boys but not for girls. Another point that should be explored is the differences in gender socialization and reactions to anxiety produced through exposure to violence. Males are socialized to be "tough" and therefore would possibly react from anxiety with aggressive tendencies, thinking in terms of fighting back or facing predators "like a man" whereas females are socialized to be "ladies" and would possibly react from anxiety by avoiding situations and people that may represent a high risk of violence. Therefore, further research is needed to demonstrate whether and how gender moderates anxiety and exposure to violence in predicting victimization.

CONCLUSION

In summary, results from empirical studies suggest relationships among exposure to violence, anxiety, and victimization for both males and females. This study attempted to examine these relationships with two models. First, was hypothesized that anxiety would mediate the relation between exposure to violence and victimization. A mediating effect for anxiety would be established if the statistical association between exposure to violence and victimization was found to decrease once associations between anxiety and victimization were specified (Baron & Kenny, 1986). Secondly, was hypothesized that the predictors of victimization would be moderated by gender. A moderating effect for gender would be established if the statistical association between the interaction of gender and the predictor variables were statistically significant (Baron & Kenny, 1986).

METHODOLOGY

Data

Existing data from a survey administered to all seventh-grade students (N=1,394) attending eight middle schools located in a small southern city is used for this analysis. After all preliminary analysis the final sample resulted in N=1131. Of these students, 526 were male (47%) and 605 were female (53%). The majority of the students were African-American (67%), followed by Caucasian (28%), and other (5%).

Instruments

Victimization scale The victimization scale includes eight items regarding the incidences of victimization in general and on school campus. This scale contains items designed to measure aspects of victimization through negative physical actions (e.g., being hit, kicked, or pushed in general or on campus; badly beaten up; bullied; threatened/injured with a knife or sharp weapon; and threatened/injured with a gun). The scale range is from 1 = never to 5 = very often and has satisfactory internal consistency (α =.73).

Exposure to violence at school scale This scale includes seven items regarding the student's exposure to violent incidents on school property. Items include how often students see others hit, kicked, or pushed on school property; others bullied; others badly beaten; others threatened/injured with a knife or sharp object; and others threatened/injured with a gun. The exposure to violence at school scale items range from 1 = never to 5 = very often and has satisfactory internal consistency (α = .71).

Anxiety scale This scale includes five items regarding how often students feel nervous, grouchy or cranky, tense, worry, or upset. The anxiety scale items range from 1 = very often to 5 = never,

indicating lower scores represent higher anxiety. The anxiety scale has satisfactory internal consistency ($\alpha = .80$).

Analysis

Means and standard deviations for the overall sample as well as for males and females separately are presented in Table 1. Preliminary analysis of the data indicated possible skewness of the individual items comprising the dependent variable (victimization). After creating the composite measure, however, victimization obtained a normal distribution where the skew = 2.09 and kurtosis = 6.97. Further analysis produced a critical skew value of .31, which is lower than the .50 recommended by Runyon & Haber (1991) for a skew critical value. Exposure to violence as well as anxiety had good distributional properties with a skew of 1.21 and kurtosis of 2.76 for exposure to violence and a skew of -.926 and kurtosis of .615 for anxiety. There were no extreme outlying individuals who were influential data points for any variable. Acceptable internal consistency coefficients were found for three measures with Cronbach's alphas ranging from .71 to .80; victimization $\alpha = .73$; exposure to violence $\alpha = .71$; and anxiety $\alpha = .80$.

Preliminary data analysis explored the extent to which subjects retained in the study differed from those with missing data on the dependent and independent variables. A *t* test was run to determine the mean differences on victimization, exposure to violence, and anxiety for the sample (N=1133) and the missing subjects (155), resulting in a non statistical significance on the dependent and independent variables ($t=1.39$, $p< .05$; $t=-.196$, $p<.05$; $t=-1.954$, $p<.05$; respectively).

Due to reported gender differences on victimization, exposure to violence, and anxiety, a series of independent *t* tests were calculated to examine potential gender differences (see Table 2). These analyses revealed significant gender differences for victimization, exposure to

violence, and anxiety, consistent with previous findings reported by Grills & Ollendick (2002) and McGee & Baker (2002). The effect sizes for significant differences, as suggested by Cohen, (1988) indicated the magnitude of the effects ranged from small to medium and are reported in Table 2.

Correlation analyses for both genders revealed significant relations among the variables (see Table 3). Specifically, a significant positive correlation was obtained between anxiety and victimization for both males and females, indicating students reporting higher levels of anxiety also reported more victimization, which did not support the proposed hypothesis. In addition, a significant positive correlation was found between exposure to violence and anxiety, suggesting that males and females reporting more exposure to violence also report higher levels of anxiety. Finally, a significant positive correlation was also found for exposure to violence and victimization, signifying that males and females who reported more exposure to violence also reported more victimization. As evident in Table 3, these relations were somewhat stronger for males than females.

RESULTS

Moderator Model

Previous literature has suggested that gender may moderate the predictors of victimization. Therefore, interaction terms were calculated between gender and each independent variable, as per Cohen (1983). These interaction terms provided a test of whether the effects of exposure to violence and anxiety on victimization were different for males versus females.

Hierarchical regression analyses were conducted to examine the hypothesized moderating role of gender. Two interaction terms were created. The first was dummy coded gender by

exposure and the second interaction term was dummy coded gender by anxiety. For the first step of the regression, victimization was regressed on each predictor. Next the two interaction terms were entered into the model. The addition of the interaction terms increased the predictive value of the model, $F(4, 1126) = 179.18, p < .000$. As shown in Table 4, adding the predictor variables accounted for an additional 2% of the variance of victimization. Thus, evidence of gender moderation is given therefore indicating the need to test for mediation of anxiety separately for males and females.

Mediator Model

To examine the potential mediating role of anxiety on the relation between exposure to violence and victimization, multiple regression analyses was conducted for each sex separately. As recommended by Baron & Kenny (1986) three prerequisites are necessary to examine the mediating role of anxiety. A statistically significant relation had to be established between the predictor and criterion variables, predictor and mediator variables, and mediator and criterion variables. As shown in Table 5 these prerequisites were met for both males and females, albeit the relation between anxiety and victimization was greater for females than males.

Hierarchical regression analyses were conducted to examine the mediating role of anxiety on victimization. For the first step of the regression, victimization was first regressed on exposure to violence and then anxiety. For males, when exposure to violence was entered in the first step of the hierarchical regression equation, the standardized beta coefficient was significant ($t = 19.257, p < .000$). When anxiety was entered in the second step of this equation, the standardized beta coefficient for exposure to violence remained significant ($t = 17.987, p < .000$) indicating that the relation between exposure and victimization was partially mediated for males. However, given the small differences between the standardized beta coefficients, the mediation

was not very strong. For females, the standardized beta coefficient was also significant (t = 14.808, $p < .000$) when exposure to violence was entered in the first step of the hierarchical regression equation. Additionally, when anxiety was entered in the second step, the standardized beta coefficients for exposure to violence ($t = 13.572$; $p < .000$) remained significant. The coefficient dropped from .516 when victimization was regressed on exposure to violence to .478 when anxiety was added to the regression equation. This finding indicates that anxiety also mediated the relation between exposure to violence and victimization for females. However, the differences in the standardized beta coefficients were greater for males than females, indicating that anxiety mediates the relation between exposure to violence and victimization somewhat stronger for males than females (see Table 5).

DISCUSSION

This study sought to examine the mediating effect of anxiety on the relation between exposure to violence and victimization moderated by gender for 7th grade students attending a public middle school. Analyses also examined differences in the means for gender on victimization, exposure to violence, and anxiety.

Significant gender differences were found regarding victimization, such that males reported greater levels of victimization than females. This finding is consistent with several previous studies (Grills & Ollendick 2002; McGee & Baker; 2002) however, other studies found gender differences surface for certain types of victimization such as direct (e.g. physical assault, overt confrontation) or relational (e.g. indirect, social manipulation). Males tend to report more direct victimization where females report more relational victimization. The measure used in this study taps more direct types of victimization (being hit, kicked, pushed, attacked or threatened with a weapon such as a knife or gun) and thus might be more applicable to males

than females. Because this study used existing data, exploration of indirect victimization was not possible.

Additionally, significant gender differences were found for exposure to violence, in that again, males reported more exposure to violence than females. Schwab-Stone, et al., (1995) reports that males are more at risk for exposure to violence than females, due to the comparably higher levels of risk taking and externalizing behaviors shown by them.

Also as expected, significant gender differences were found for anxiety with females reporting higher levels of anxiety than males. This finding corresponds with existing literature on anxiety (Grills & Ollendick, 2002). A possible explanation for these findings could be related to differences in gender role socialization and expectations where it is more acceptable for females to report anxiety concerns than for males.

Gender was found to be significant as a moderator for effects of exposure to violence and anxiety on victimization. Therefore, anxiety as a mediator for the exposure to violence and victimization was examined separately for males and females. As predicted, results of this study revealed some support for anxiety as a mediator of exposure to violence and victimization relation. Specifically, it was found that anxiety mediates the relationship between exposure to violence and victimization somewhat stronger for males than females. However, for both males and females exposure to violence is related to higher levels of anxiety. A negative relationship between anxiety and victimization was hypothesized, however, this was not supported. Instead, it was found that males and females reporting higher anxiety levels also reported higher victimization levels.

There were a number of limitations to this study that need to be acknowledged. First, the study used existing data, comprised of seventh grade students from a small urban city within one

school district. Therefore, the generalizability of these findings to other populations would need more documentation. Second, the victimization measure is somewhat limited, sampling only direct types of victimization rather than direct and indirect. Future studies using more comprehensive measures would contribute more to the research in this area. Thirdly, only a small number of variables were examined as predictors of victimization. In future studies other predictors should be included such as race, SES, or family structure. Additionally, because this is the first known study to test the mediating role of anxiety as a mediator for the exposure to violence and victimization, replication with independent samples is necessary to establish robustness of the findings.

In summary, results of this study add to the growing literature on victimization. Additional research should continue to examine relationships and address the concerns of student victimization within the schools as well as levels of anxiety as perceived by males and females through exposure to violence.

REFERENCES

Attar, B. K., Guerra, N. G., & Tolan, P. H. (1994). Neighborhood disadvantaged, stressful life events, and adjustment in urban elementary school children. *Journal of Clinical Child Psychology, 23,* 391-400.

Baker, J. A. (1998). Are we missing the forest for the trees? Considering the social context of school violence. *Journal of School Psychology, 36 (1),* 29-44.

Ballard, M., Argus, T., & Remley, Jr., T.P. (1999). Bullying and school violence: A proposed prevention program. *NASSP Bulletin, 83* (607), 38-47.

Baron, R. M. & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51 (6),* 1173-1182.

Batsche, G. M., & Knoff, H. M. (1994). Bullies and their victims: understanding a pervasive problem in the schools. *School Psychology Review, 23,* 165-174.

Bosworth, K., Espelage, D. L., & Simon, T. R. (1999). Factors associated with bullying behavior in middle school students. *Journal of Early Adolescence, 19 (3),* 341-362.

Boulton, M. I. & Smith, P.K. (1994). Bully/victim problems in middle-school children: Stability, self-perceived competence, peer perceptions, and peer acceptance. *British Journal of Development Psychology, 12,* 315-329.

Boulton, M. I. & Underwood, K. (1992). Bully/victim problems among middle school children. British Journal of Educational Psychology, 62, 78-87.

Cohen, J., & Cohen, P. (1983). Applied multiple regression/correlation analysis for the behavioral sciences (3rd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Hillsdale, NJ: Lawrence Earlbaum Associates.

Cooley-Quille, M., Boyd, R. C., Frantz, E., & Walsh, J. (2001). Emotional and behavioral impact of exposure to community violence in inner-city adolescents. *Journal of Clinical Child Psycology, 30 (1),* 199-206.

Crick, N. R., Bigbee, M. A., & Howes, C. (1996). Gender differences in children's normative beliefs about aggression: How do I hurt thee? Let me count the ways. *Child Development, 67,* 1003-1014.

Egan, S. K. & Perry, D. G. (1998). Does low self-regard invite victimization? *Developmental Psychology, 34,* 299-309.

Fitzpatrick, K. M. (1999). Violent victimization among America's school children. *Journal of Interpersonal Violence, 14 (10),* 1055-1069.

Grant, S. H., VanAcker, R., Guerra, N., Duplechain, R., & Coen, M. (1998). A school and classroom enhancement program to prevent the development of antisocial behavior in children from high-risk neighborhoods. *Preventing School Failure, 42 (3),* 121-127.

Grills, A. E. & Ollendick, T. H. (2002). Peer victimization, global self-worth, and anxiety in middle school children. *Journal of Clinical Child and Adolescent Psychology, 31, (1),* 59-68.

Gumpel, T. P. & Meadan, H. (2000). Children's perceptions of school-based violence. British *Journal of Educational Psychology, 70,* 391-404.

Hazler, R. J., Miller, D. L., Carney, J. V., & Green, S. (2001). Adult recognition of school bullying situations. *Educational Research, 43 (2),* 133-146.

Hanish, L. D. & Guerra, N. G. (2000). Predictors of peer victimization among urban youth. Social Development, 9 (4), 521-543.

Hoover, J. H., Oliver, R., & Hazler, R. J. (1992). Bullying: Perceptions of adolescent victims in the Midwestern USA. *School Psychology International, 13,* 5-16.

Hoover, J. H., and Hazler, R. J. (1991). Bullies and victims. *Elementary School Guidance and Counseling, 25,* 212-219.

Jang, S. J. & Thornberry, T. P. (1998). Self-esteem, delinquent peers, and delinquency: A test of the self-enhancement thesis. *American Sociological Review, 63,* 586-598.

Johnston, L., O'Malley, P., & Bachman, J. (1993). *Monitoring the future 1992.* Ann Arbor, MI: Institute for Social Research, University of Michigan.

Kochenderfer, B.J., & Ladd, G.W. (1996). Peer victimization: cause or consequence of school maladjustment. *Child Development, 67,* 1305-1317.

Kumpulainen, K., Rasanen, E., & Henttonen, I. (1999). Children involved in bullying: Psychological disturbance and the persistence of the involvement. *Child Abuse and Neglect, 23,* 1253-1262.

Leff, S. S., Kupersmidt, J.B., Patterson, C., & Power, T.J. (1999). Factors influencing teacher predictions of peer bullying and victimization. *School Psychology Review, 28,* 505-517.

Leff, S.S., Power, T.J., Manz, P.H., Costigan, T.E., and Nabors, L.A. (2001). School-based aggression prevention programs for young children: current status and implications for violence prevention. *School Psychology Review, 30,* (3), 344-362.

Lorber, R. Felton, D. K., & Reid, J. B. (1984). A social learning approach to the reduction of coercive process in child abuse families: A molecular analysis. Advances in Behavior Research and Therapy, 6, 29-45.

Lorion, R. P. (1998). Exposure to urban violence: Contamination of the school environment. In D. S. Elliott, B. A. Hamburg, & K. R. Williams (Eds.), *Violence in American Schools: A New Perspective* (pp. 293-311). New York: Cambridge University Press.

Ma, Xin. (2001). Bullying and being bullied: To what extent are bullies also victims? *American Educational Research Journal, 38 (2),* 351-370.

Martinez, P., & Richters, J. E. (1993). The NIMH community violence project: II. Childrens distress symptoms associated with violence exposure. *Psychiatry: Interpersonal and Biological Process, 56,* 22-35.

McGee, Z. T. & Baker, S. R. (2002). Impact of violence on problem behavior among adolescents: Risk factors among an urban sample. *Journal of Contemporary Criminal Justice, 18 (1),* 74-93.

Olweus, D. (1978). *Aggression in the schools: Bullies and whipping boys.* Washington, D. C.: Hemisphere.

Olweus, D. (1989). Bully/victim problems among school children: basic facts and effects of a school based intrvention program. In K. Rubin & D. Pepler (Ed.), *The development and treatment of childhood aggression.* Hillsdale NJ: Erlbaum.

Olweus, D. (1994). Bullying at school: Long-term outcomes for the victims and an effective school-based intervention program. In L. R. Huesmann (Ed.), *Aggressive Behavior: Current Perspectives* (pp. 97-130). New York: Wiley.

Oliver, R.L., Hoover, J.H., and Hazler, R. J. (1994). The perceived roles of bullying in small town midwestern schools. *Journal of Counseling Development, 72,* 416-420.

Perry, D. G., Kusel, S. J., & Perry, L. C. (1988). Victims of peer aggression. *Developmental Psychology, 24,* 807-814.

Prinstein, M. J., Boergers, J., Vernberg, E. M. (2001). Overt and relational aggression in adolescents: Social-psychological adjustment of aggressors and victims. *Journal of Clinical Child Psychology, 30 (4),* 479- 491.

Shapiro, J. P., Dorman, R. L., Burkey, W. M., Welker, C. J., & Clough, J. B. (1997). Development and factor analysis of a measure of youth attitudes toward guns and violence. *Journal of Clinical and Child Psychology, 26,* 311-320.

Schwab-Stone, M., Ayers, T., Kasprow, W., Voyce, C., Barone, C., Shriver, T., & Weissberg, r. (1995). No safe haven: A study of violence exposure in an urban community. *Journal of the American academy of Child and Adolescent Psychiatry, 34,* 1343-1352.

Schwab-Stone, M., Chen, C., Greenberger, E., Silver, D., Lichtman, J., & Voyce, C. (1999). The effects of violence exposure on urban youth. *Journal of the American Academy of Child and Adolescent Psychiatry, 38,* 359-368.

Slee, P. T. (1994). Situational and interpersonal correlates of anxiety associated with peer victimization. Child Psychiatry and Human Development, 25 (2), 97-107

Stolzenberg, L., & Stewart, D. (2000). Gun availability and violent crime: New evidence from the national incident-based reporting system. *Social Forces, 78,* 1461-1479.

Raviv, A., Erel, O., Fox, N. A., Leavitt, L. A, Ravis, Al., Dar, I., Shahinfar, A., & Greenbaum, C. W. (2001). Individual measurement of exposure to everyday violence among elementary school children across various settings. *Journal of Community Psychology, 29 (2),* 117-140.

Rigby, K. & Slee, P. T. (1993). Dimensions of interpersonal relation among Australian children and implications for psychological well-being. *Journal of Social Psychology, 133,* 33-42.

Runyon, R. P. & Haber, A. (1991). Fundamentals of Behavioral Statistics (7th Edition). New York: NY: McGraw-Hill, Inc.

Weist, M. D., Acosta, O. M., & Youngstrom, E. A. (2001). Predictors of violence exposure among inner-city youth. *Journal of Clinical Child Psychology, 30 (1),* 187-198.

Table 1. Means, Standard Deviations, Distributions and Reliability Coefficients for Study Variables

Variable & Gender	M	SD	Skew	Kurtosis	Min	Max	α	N
Victimization								
Total	11.34	3.32	2.09	6.97	8.00	32.00	.73	1131
Males	11.88	3.86	2.04	5.97	8.00	32.00		526
Females	10.87	2.68	1.56	3.62	8.00	26.00		605
Exposure								
Total	12.05	3.47	1.21	2.76	7.00	28.00	.71	1131
Males	12.32	3.82	1.25	2.72	7.00	28.00		526
Females	11.81	3.11	1.00	1.90	7.00	28.00		605
Anxiety								
Total	15.77	3.39	-.962	.615	5.00	20.00	.80	1131
Males	16.13	3.38	-1.09	.962	5.00	20.00		526
Females	15.46	3.38	-.885	.425	5.00	20.00		605

Table 2. Mean Differences on Independent and Dependent Variables by Gender

Variable	*t*	*df*	Significance (Two-Tailed)	*d*
Victimization	5.163	1129	.000	.3089
Exposure to Violence	2.488	1129	.013	.1475
Anxiety	.167	1129	.001	.1982

Table 3. Correlations Among Victimization, Exposure, and Anxiety by Sex

Paths	Males (N=526)	Females (N=605)
Exposure –Anxiety	.260*	.230*
Anxiety – Victimization	.257*	.277*
Exposure –Victimization	.644*	.516*
Victim Regressed on		
Exposure & Anxiety (β)	.619*	.478*

Note: All coefficients are bi-variate correlations except beta while controlling for the other variables.

(P<.001)

Table 4. Summary of Hierarchical Regression Analyses for Anxiety, Exposure to Violence, and Gender Interaction Terms Predicting Victimization (N=1131)

Variable	B	SE B	β	R^2	ΔR^2
Step 1					
Exposure to Violence	.544	.023	.569**		
Anxiety	.106	.024	.108**	.364	
Step 2					
Exposure to Violence	.744	.052	.777**		
Anxiety	.212	.045	.217**		
Gender*Exposure	-.149	.033	-.346**		
Gender*Anxiety	.006	.025	-.162*	.387	.024

Note. (** p< .001) (*p< .05)

Table 5. Summary of Hierarchical Regression Analyses for Anxiety and Exposure to Violence Predicting Victimization by Gender

Variable	B	SE B	β	R^2	ΔR^2
Females (N=605)					
Step 1					
Exposure to Violence	.444	.366	.516*	.267	
Step 2					
Exposure to Violence	.411	.030	.478*		
Anxiety	.132	.028	.167*	.293	.026
Males (N=526)					
Step 1					
Exposure to Violence	.651	.034	.644*	.414	
Step 2					
Exposure to Violence	.626	.035	.619*		
Anxiety	.110	.039	.096*	.423	.009

Note. ($p < .001$)

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